

CLAIMS

The invention claimed is:

1. An electronic imaging system for a vehicle comprising:
 - a support structure for mounting to a vehicle;
 - a plurality of LEDs mounted to said support structure, said LEDs being selectively activated in response to an activation signal such that radiation is emitted; and
 - a camera mounted to said support structure for capturing images in a rearward direction from the support structure for display to a vehicle operator,
 - wherein said camera captures images at periodic intervals and said LEDs are periodically activated to emit light during those intervals when said camera is not capturing images.
2. The electronic imaging system of claim 1 and further including a control circuit for preventing said LEDs from being activated during those intervals when said camera is capturing images.
3. The electronic imaging system of claim 1 and further comprising a lens, wherein said LEDs and said camera are mounted behind said lens.
4. The electronic imaging system of claim 3, wherein said lens includes first lens region associated with said LEDs and a second lens region associated with said camera.

5. The electronic imaging system of claim 1, wherein said camera is sensitive to infrared radiation.
6. The electronic imaging system of claim 1, wherein said LEDs emit visible radiation.
7. The electronic imaging system of claim 1, wherein said LEDs emit radiation rearward of the vehicle.
8. The electronic imaging system of claim 1, wherein said camera is aimed to capture images rearward of the vehicle.
9. The electronic imaging system of claim 1, wherein said LEDs emit infrared radiation.
10. The electronic imaging system of claim 1 and further comprising a second plurality of LEDs, wherein said second LEDs are periodically activated at periodic intervals coinciding with those intervals at which said camera is capturing an image.
11. The electronic imaging system of claim 1, wherein said LEDs function as a center, high-mounted stop lamp.

12. A vehicle light module for mounting to the rear of a vehicle, the light module comprising:

at least one first light source selectively activated in response to a first activation signal such that radiation within a first bandwidth is emitted from the light module;

at least one second light source selectively activated in response to a second activation signal such that radiation within a second bandwidth is emitted from the light module, wherein the second bandwidth is different from the first bandwidth; and

a camera for capturing images for display of the images to a vehicle operator, wherein said camera captures images at periodic intervals and said first light source is periodically activated to emit light during those intervals when said camera is not capturing images, and wherein said second light source is activated at periodic intervals coinciding with those intervals at which said camera is capturing an image.

13. The vehicle light module of claim 12, wherein the first bandwidth corresponds to red light and the second bandwidth corresponds to white light.

14. The vehicle light module of claim 13, wherein the first light source includes at least one LED and the second light source includes at least one LED.

15. The vehicle light module of claim 12, wherein the first light source includes at least one LED and the second light source includes at least one LED.

16. The vehicle light module of claim 12, wherein the first bandwidth corresponds to red light and the second bandwidth corresponds to infrared radiation to which said camera is sensitive within the field of view of said camera.
17. The vehicle light module of claim 16, wherein the first light source includes at least one LED and the second light source includes at least one LED.
18. The vehicle light module of claim 12 and further includes a third light source selectively activated in response to a third activation signal such that radiation within a third bandwidth is emitted from the light module, wherein the third bandwidth is different from the first and second bandwidths.
19. The vehicle light module of claim 18, wherein the first bandwidth corresponds to red light, the second bandwidth corresponds to white light, and the third bandwidth corresponds to infrared radiation.
20. The vehicle light module of claim 19, wherein the first light source includes at least one LED, the second light source includes at least one LED, and the third light source includes at least one LED.
21. The vehicle light module of claim 12, wherein said camera is sensitive to infrared radiation.

22. The vehicle light module of claim 12 and further comprising a controller for preventing said first light source from being activated during those intervals when said camera is capturing images.

23. The vehicle light module of claim 12, wherein the first light source emits visible radiation.

24. The vehicle light module of claim 12, wherein the first and second light sources emit radiation rearward of the vehicle.

25. The vehicle light module of claim 12, wherein said camera is aimed to capture images rearward of the vehicle.

26. The vehicle light module of claim 12, wherein the light module is a center, high-mounted stop lamp.

27. The vehicle light module of claim 12 and further comprising a support structure for mounting to a vehicle, wherein said first and second light sources and said camera are mounted to said support structure.

28. The vehicle light module of claim 27 and further comprising a lens mounted to said support structure.
29. The vehicle light module of claim 12 and further comprising a lens, wherein the first and second light sources and said camera are mounted behind said lens.
30. The vehicle light module of claim 29, wherein said lens includes first and second lens regions.
31. The vehicle light module of claim 30, wherein said first and second lens regions are clear.
32. The vehicle light module of claim 30, wherein said first lens region is red.
33. The vehicle light module of claim 29, wherein said lens includes first lens region associated with the first light source and a second lens region associated with said camera.
34. The vehicle light module of claim 12, wherein the first activation signal is a brake signal and the first bandwidth corresponds to red light.
35. The vehicle light module of claim 12, wherein said second light source functions as a back-up light.

36. The vehicle light module of claim 12, wherein said second light source functions as a cargo light.

37. The vehicle light module of claim 12, wherein said second light source functions as a rear illumination light.

38. The vehicle light module of claim 12, wherein the first activation signal is a turn signal.

39. The vehicle light module of claim 12, wherein the first activation signal is a running light signal.

40. A center-mounted stop lamp assembly for mounting to the rear of a vehicle, the lamp assembly comprising:

a support structure for mounting to a vehicle;

a plurality of first LEDs selectively activated in response to a brake activation signal

such that red light is emitted from the lamp assembly rearward of the vehicle;

a plurality of second LEDs selectively activated in response to a second activation signal such that infrared radiation is emitted from the lamp assembly rearward of the vehicle;

a camera mounted to said support structure for capturing images in a rearward direction from said support structure for display of the images to a vehicle operator, wherein said camera captures images at periodic intervals and is sensitive to infrared radiation; and

a control circuit for preventing activation of said first LEDs during those intervals when said camera is capturing images, and for activating said second LEDs at least during those intervals at which said camera is capturing an image.

41. The center-mounted stop lamp assembly of claim 40 and further comprising a plurality of third LEDs selectively activated in response to a third activation signal such that white light is emitted from the lamp assembly.

42. The center-mounted stop lamp assembly of claim 41, wherein said third LEDs function as a cargo light.

43. The center-mounted stop lamp assembly of claim 40, wherein said first and second LEDs are mounted to said support structure.

44. The center-mounted stop lamp assembly of claim 40 and further comprising a cover mounted to said support structure.

45. The center-mounted stop lamp assembly of claim 44, wherein said first and second LEDs and said camera are mounted behind said cover.

46. The center-mounted stop lamp assembly of claim 45, wherein said cover includes a first cover region through which light from said first LEDs is emitted, a second cover region

through which light from said second LEDs is emitted, and a third region through which said camera captures images.

47. The center-mounted stop lamp assembly of claim 46, wherein said first and third cover regions are clear.

48. The center-mounted stop lamp assembly of claim 46, wherein said first cover region is red.